

BRIEFER ARTICLES.

Pleodorina in Indiana.—On the eleventh of last May the writer collected specimens of *Callitriche heterophylla* Pursh, and *Nitella* sp.? from a shallow, stagnant pond near Bloomington, Ind. A small quantity of this material was kept fresh in a bell-jar in a north window of the laboratory. On June 29th, while searching for unicellular algæ for the use of my class, I noticed numbers of little, pale green specks along the wall of the glass vessel below the surface of the water. They were at once taken to be *Volvox*. A microscopic examination convinced me, however, that these plants differed from any *Volvox* that I had ever seen.

Having no special literature on the *Volvocineæ*, I did not feel certain as to the precise limits of the genus *Volvox*.

However, a study of the life history was begun immediately as, in the specimens in question, the asexual development from the gonidia could be very readily followed.

While in the midst of my investigations, the *BOTANICAL GAZETTE* for July, to my agreeable surprise, brought me the paper of Mr. W. R. Shaw of Stanford University on "*Pleodorina*, a new genus of the *Volvocineæ*."

A glance at this paper convinced me that the organism at hand was *Pleodorina Californica* Shaw, and a closer comparison confirmed the opinion. Almost every detail in the study made by me agreed with those presented in Mr. Shaw's paper.

Together with few minor details which may be of little importance, some of the specimens examined by me, however, were a little larger than the measurements given in the paper. The plant body of the largest individuals observed, measured 352μ in diameter, the gonidia just previous to the first division, $24-32\mu$; vegetative cells, just one-half of the gonidia in the same colony, $12-16\mu$.

Up to July 27th the plants, then numbering thousands in the same bell-jar, were in good condition, multiplying rapidly.

It is to be hoped that the sexual reproduction, if possessed by this plant, may occur and be observed this fall.—*DAVID M. MOTTIER, Indiana University, Bloomington.*

Pleodorina in Illinois.—The new alga *Pleodorina Californica* described in the July *GAZETTE* was found during the month of June in abundance at Havana, Ill., by Prof. T. J. Burrill and myself. This is where the University of Illinois has its new Experiment Station for

the study of aquatic life, and is a rich collecting ground for algæ.—
G. P. CLINTON, *Champaign, Ill.*

Fruiting *Eustichia Norvegica* Brid.—This rare moss has been known in the vegetative condition for many years. It occurs in different parts of the world, and has been found in half a dozen or more localities in this country. In the fruiting condition, however, it is little known. Mrs. E. G. Britton discovered it in fruit at the dells of the Wisconsin river, near Kilbourn City, Wisconsin, in July, 1883, and described the fruit in the *Bulletin* of the Torrey Botanical Club 10: 99. 1883. Seventeen fruiting specimens were found. These, up to the present summer, were all that were known to exist. The herbarium of the University of Wisconsin is now, however, in possession of a sufficient quantity in fruiting condition to distribute to all bryologists desiring it.¹

While working on a botanical survey of the Wisconsin river valley, Mr. F. D. Heald and I collected between eight and nine hundred fruiting specimens in "Witches' Gulch," near Kilbourn City, Wisconsin, in the latter part of July of the present year.

Among the capsules are many one year old at least, while it is quite possible that some of them are older. This would indicate that the difficulty experienced in finding fruiting material is due chiefly to rarity of fructification and not to the disappearance of fruiting parts soon after maturity. The capsules probably matured in July. Part of the material collected by Mrs. Britton in the early part of July is immature. The capsules collected this summer are, with scarcely an exception, mature, many of them having already dehisced. An examination of the capsules shows the entire absence of peristome and annulus.—L. S. CHENEY, *University of Wisconsin.*

¹ Applications for specimens must be accompanied by postage (unless from foreign countries) and should be addressed to the Department of Botany, University of Wisconsin, Madison, Wis., U. S. A.